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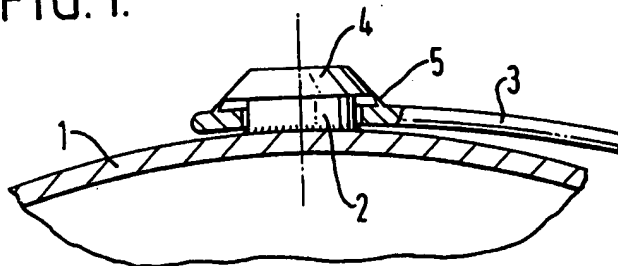
(56) Documents cited
US 3638823 WO 83/02560
EP A 0076525

(58) Field of search
B8D
B4K

(54) Temporarily fastening down a pail handle

(57) A plastics material pail has a handle (3) intended to be pivotal when the pail is used, which handle is mounted by means of non-pivotal mounting elements welded to the outside of the pail wall (1). The handle (3) is initially fastened in a turned-down position by means of an easily breakable fin (5) forming a bridge between the mounting element or the pail wall and the material of the handle (3). The fin (5) or a similar connection bridge can easily be provided during welding of a pin (4) to the container wall (1) by applying a little more heat than necessary to weld the pin (2) to the container wall (1). The initial fastening of the handle in a turned-down position prevents the handle from rising above the upper surface of the pail lid during palletizing and stacking of a pail delivered from a filling line. The mounting elements may each comprise either a pin (2) with head (4) or an apertured ear into which an inwardly projecting pin on the handle fits. The breakable fin may extend around the whole periphery of the head (4) or a plurality of fins may be provided. The connection bridge may be a spot weld.

FIG.1.



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FIG. 1.

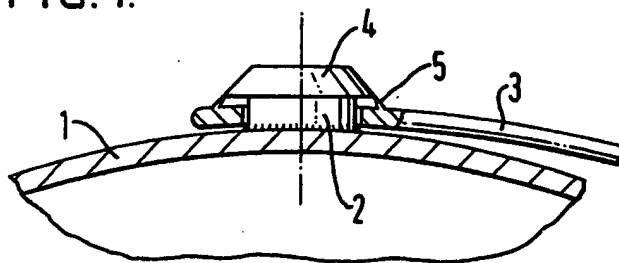
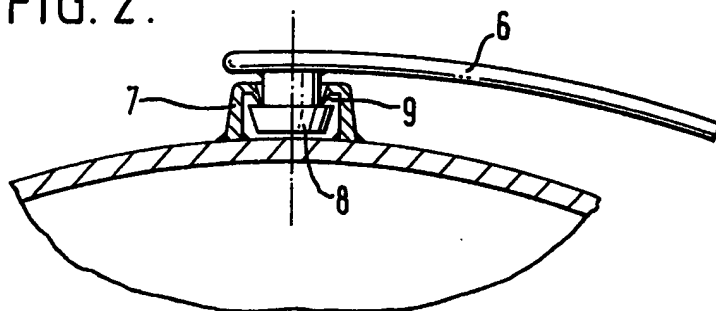


FIG. 2.



SPECIFICATION

Plastics material pail with a handle and a method of fastening the handle to the pail

5 The present invention relates to a plastics material pail, particularly but not exclusively for containing paint or food, with a handle which is pivotally attached at each end to two opposite mounting
10 elements, e.g. pins or ears, non-pivotally disposed on the outside of the pail wall. The invention also relates to a method of fastening the handle to such a pail.

Pails, which have been filled, e.g. with paint, and
15 which have been provided with lids, are carried from the filling line to an accumulating table, on which a number of pails are accumulated, and are thereafter transferred on to pallets. The pails are exposed to constant vibration from transport mechanisms
20 which carry them to and from the table, which causes a large number of the pail handles, which during the filling of the pails and the provision of the lids have been turned down to the side, to rise above the upper surfaces of the pail lids. This provides an
25 obstacle to the following mechanical stacking and palletizing of the pails, and up to the present it has been necessary for a person to supervise the accumulating table and to press raised handles down manually along the sides of the pails. Fre-
30 quently, the accumulating table is so bulky that it will be necessary to stop the transport mechanisms to allow the person who supervises the pails to obtain access to the accumulating table and press down the raised handles.

35 This problem has been solved in a surprisingly easy way by the present invention according to which at least one end of the handle an easily breakable connection bridge has been provided between the material of the handle and the material
40 of the non-pivotal mounting element or material of the pail wall, said bridge being formed by flow of said material.

The connection bridge may be a spot weld, or it may be a thin fin or strand, so that it can be easily
45 ruptured when the consumer is using the pail for the first time.

Pivotal handles for plastics material pails, e.g. for paint, are generally mounted on two diametrically opposed welded pins, protruding from the pail wall,
50 each engaging in an aperture formed in the handle and provided on the outer end with a head, the diameter of which is a little larger than the diameter of the aperture so that the head prevents the handle from getting loose from the pin. On a pail of this
55 kind, the handle can easily be provisionally fastened by means of a peripheral fin between the material at the underside of the head of a pin and the material of the handle. A thin fin of this kind, extending around the whole periphery of the head, can easily be
60 provided by applying a little additional heat to the pin when in the usual way it is welded to the pail wall. However, an alternative may be the provision of a plurality of bridges, each extending over a small arc along the periphery of the pin or another
65 non-pivotal mounting element. The invention may

also be applied to pails with handles of the kind where a pin, protruding from each end of the handle, is engaging an aperture in an ear which has been welded to the outside of the pail wall. In this case a thin breakable fin may form a bridge between the
70 aperture-edge of the ear and the periphery of the pin. A bridge of this kind may also easily be made by welding the ear together with the handle received therein.

75 Embodiments of the invention will now be described by way of example with reference to Figures 1 and 2 of the accompanying drawings.

In each Figure only a partial view of a pail with a wall 1 has been shown.

80 In Figure 1, a pin 2 has been welded to the outside of the wall 1. A corresponding pin has been welded at a diametrically opposite position to the wall. These pins 2 serve to mount a handle 3 which is pivotal in use. The handle is provided at each end
85 with an aperture, in which a pin 2 is received. Each pin 2 has a head 4 extending radially beyond the peripheral edge of the corresponding aperture of the handle thus preventing the handle from getting loose from the pail. During welding a little more heat
90 than necessary for the welding has been applied, whereby the material at the underside of the head 4 has been caused to flow so that a thin fin has been provided, which forms a bridge between the material of the handle 3 and the non-pivotal pin 2. The
95 handle 3, which, during welding of the pins, has been turned down to the side to prevent it from rising above the lid of the pail, has in this way been fastened down for palletizing and stacking. On the other hand, the fin is so weak that it can easily be
100 ruptured when - in order to carry the pail - the handle 3 is turned up to a vertical position by a user.

Figure 2 shows an embodiment in which a handle 6 is pivotally mounted in two ears 7 which have been welded diametrically opposite to each other on the
105 outside of the pail wall 1. The handle 6 is provided at each end with an inwardly-projecting pin which extends through an aperture in the ear 7 and which terminates in a head 8 which prevents the handle from getting loose. During welding, the ear 7 has
110 been pressed against the container wall 1, and a little more heat than necessary for the welding has been applied whereby a thin fin 9 has been provided which forms an easily breakable bridge between the inwardly-projecting pin of the handle and the edge
115 of the aperture. It should be understood that it is possible to establish the bridge in many other ways. The head 8 can for example be formed in such a way that the material from it flows together with the material from the ear or from the container wall.

120 Even if it is generally advantageous to provide the breakable bridge between the handle and the non-pivotal mounting element during the welding of the latter to the pail wall, it should be understood that the small flow of material for the formation of a
125 provisional, easily breakable bridge can alternatively be provided later on, e.g. by spot welding or merely by a light touch with a soldering iron.

CLAIMS

1. A plastics material pail with a handle, which handle is pivotally attached at its ends to two
5 opposite mounting elements non-pivotally disposed on the outside of the pail wall, wherein at least at one end of the handle an easily breakable connection bridge has been provided between the material of the handle and the material of the non-pivotal
10 mounting element or the material of the pail wall, said bridge being formed by flow of said material.
2. A pail according to claim 1 wherein said mounting elements comprise two pins welded to the pail, each extending through an aperture in the
15 handle and being provided with a head at its outer end, which head extends over the peripheral edge of the aperture, and wherein a peripheral fin between the material at the underside of the head of at least one pin and the material of the handle constitutes
20 the connection bridge.
3. A pail according to claim 1 wherein said mounting elements comprise two ears welded to the pail, each having an aperture for the reception of a pin projecting inwardly from the handle, and where-
25 in a peripheral fin between the edge of at least one aperture and the inwardly-projecting pin therein constitutes the connection bridge.
4. A pail according to any of the preceding claims, wherein at least at one end of the handle
30 there is provided a plurality of connection bridges, each extending over a small arc along the periphery of the non-pivotal mounting element.
5. A method of fastening a handle to a plastics material pail by welding of mounting elements
35 outside at diametrically opposed points of the wall of the pail, wherein additional heat is produced in at least one mounting element during the welding thereof so that an easily breakable connection bridge is formed between the material of the handle and the
40 mounting element.
6. A plastics material pail with a handle substantially as hereinbefore described with reference to Figure 1 or Figure 2 of the accompanying drawings.
7. A method of fastening a handle to a plastics
45 material pail substantially as hereinbefore described with reference to Figure 1 or Figure 2 of the accompanying drawings.